

**MISSOURI DEPARTMENT  
OF  
CONSERVATION**

**STRATEGIC PLAN**

July 1, 2003



Missouri Department of Conservation  
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## **Message from the Director**

Every successful organization requires some amount of “strategic” planning. As the adage implies, if we don’t know where we’re going, any road will do. So it’s important to establish direction and milestones to keep us from wandering aimlessly across the conservation landscape. Moreover, it’s vital that everyone know what’s important to the agency.

Our constitutional mandate and Department mission and vision statements establish direction, but the issues and results stated in this plan give us greater focus, while performance measures give us the means for determining progress. All of these taken together will enhance our ability to manage the fish, forest, and wildlife resources and our need to be accountable to all the citizens of the state.

This plan will be subject to regular revisions. New issues may be added at anytime while existing items will be reported on annually and modified as new information is available or conditions change. In addition, much of the detail usually found in strategic plans has been purposefully omitted. Instead, we will focus on results and each Department division and region will be expected to “operationalize” this plan through the various Department planning and budgeting processes available to them.

We are committed to this process as a part of how we do business. It has served the Department well over the past 25 years. We also value the comments and suggestions of the public and all Department employees, and we hope you’ll continue to support and contribute to this important effort.

*John D. Hoskins, Director*



## MISSOURI STATE CONSTITUTIONAL LANGUAGE

### CONSERVATION

**Section 40(a). Conservation commission, members, qualifications, terms, how appointed—duties of commission—expenses of members.**—The control, management, restoration, conservation and regulation of the bird, fish, game, forestry and all wildlife resources of the state, including hatcheries, sanctuaries, refuges, reservations and all other property owned, acquired or used for such purposes and the acquisition and establishment thereof, and the administration of all laws pertaining thereto, shall be vested in a conservation commission consisting of four members appointed by the governor, by and with the advice of and consent of the senate, not more than two of whom shall be of the same political party. The members shall have knowledge of and interest in wildlife conservation. The members shall hold office for terms of six years beginning on the first day of July of consecutive odd years. Two of the terms shall be concurrent; one shall begin two years before and one two years after the concurrent terms. If the governor fails to fill a vacancy within thirty days, the remaining members shall fill the vacancy for the unexpired term. The members shall receive no salary or other compensation for their services as members, but shall receive their necessary traveling and other expenses incurred while actually engaged in the discharge of their official duties.

Source: Const. of 1875, Art. XIV, Sec. 16 (as adopted November 3, 1936). (Amended August 8, 1972)

**Section 40(b). Incumbent members.**—The members of the present conservation commission shall serve out the terms for which they were appointed, with all their powers and duties.

**Section 41. Acquisition of property—eminent domain.**—The commission may acquire by purchase, gift, eminent domain, or otherwise, all property necessary, useful or convenient for its purposes, and shall exercise the right of eminent domain as provided by law for the highway commission.

Source: Const. of 1875, Art. XIV, Sec. 16.

**Section 42. Director of conservation and personnel of commission.**—The commission shall appoint a director of conservation who, with its approval, shall appoint the assistants and other employees deemed necessary by the commission. The commission shall fix the qualifications and salaries of the director and all appointees and employees, and none of its members shall be an appointee or employee.

Source: Const. of 1875, Art. XIV, Sec. 16.

**Section 43(a). Sales tax, use for conservation purposes.**—For the purpose of providing additional moneys to be expended and used by the conservation commission, department of conservation, for the control, management, restoration, conservation and regulation of the bird, fish, game, forestry and wildlife resources of the state, including the purchase or other acquisition of property for said purposes, and for the administration of the laws pertaining thereto, an additional sales tax of one-eighth of one percent is hereby levied and imposed upon all sellers for the privilege of selling tangible personal property or rendering taxable services at retail in this state upon the sales and services which now are or hereafter are listed and set forth in, and, except as to the amount of tax, subject to the provisions of and to be collected as provided in the "Sales Tax Law" and subject to the rules and regulations promulgated in connection therewith; and an additional use tax of one-eighth of one percent is levied and imposed for the privilege of storing, using or consuming within this state any article of tangible

personal property as set forth and provided in the "Compensating Use Tax Law" and, except as to the amount of the tax, subject to the provisions of and to be collected as provided in the "Compensating Use Tax Law" and subject to the rules and regulations promulgated in connection therewith.

(Adopted November 2, 1976)

**Section 43(b). Use of revenue and funds of conservation commission.**—The moneys arising from the additional sales and use taxes provided for in section 43(a) hereof and all fees, moneys or funds arising from the operation and transactions of the conservation commission, department of conservation, and from the application and the administration of the laws and regulations pertaining to the bird, fish, game, forestry and wildlife resources of the state and from the sale of property used for said purposes, shall be expended and used by the conservation commission, department of conservation, for the control, management, restoration, conservation and regulation of bird, fish, game, forestry and wildlife resources of the state, including the purchase or other acquisition of property for said purposes, and for the administration of the laws pertaining thereto, and for no other purpose. The moneys and funds of the conservation commission arising from the additional sales and use taxes provided for in S 43(a) hereof shall also be used by the conservation commission, department of conservation, to make payments to counties for the unimproved value of land for distribution to the appropriate political subdivisions as payment in lieu of real property taxes for privately owned land acquired by the commission after July 1, 1977, and for land classified as forest cropland in the forest cropland program administered by the department of conservation in such amounts as may be determined by the conservation commission, but in no event shall amount determined be less than the property tax being paid at the time of purchase of acquired lands.

Source: Const. of 1875, Art. XIV, Sec. 16. (Amended November 2, 1976) (Amended November 4, 1980)

**Section 43(c). Effective date—self-enforceability.**—The effective date of this amendment shall be July 1, 1977. All laws inconsistent with this amendment shall no longer remain in full force and effect after July 1, 1977. All of the provisions of sections 43(a)-(c) shall be self-enforcing except that the general assembly shall adjust brackets for the collection of the sales and use taxes.

(Adopted November 2, 1976)

**Section 44. Self-enforceability—enabling clause—repealing clause.**—Sections 40-43, inclusive, of this article shall be self-enforcing, and laws not inconsistent therewith may be enacted in aid thereof. All existing laws inconsistent with this article shall no longer remain in force or effect.

Source: Const. of 1875, Art. XIV, Sec. 16

**Section 45. Rules and regulations—filing—review.**—The rules and regulations of the commission not relating to its organization and internal management shall become effective not less than ten days after being filed with the secretary of state as provided in section 16 of this article, and such final rules and regulations affecting private rights as are judicial or quasi-judicial in nature shall be subject to the judicial review provided in section 22 of article V.

**Section 46. Distribution of rules and regulations.**—The commission shall supply to all persons on request, printed copies of its rules and regulations not relating to organization or internal management.

## **OUR MISSION**

To protect and manage the fish, forest, and wildlife resources of the state; to serve the public and facilitate their participation in resource management activities; and to provide opportunity for all citizens to use, enjoy, and learn about fish, forest, and wildlife resources.

## **OUR VISION**

To have healthy, sustainable plant and animal communities throughout the state of Missouri for future generations to use and enjoy, and that fish, forest, and wildlife resources are in appreciably better condition tomorrow than they are today.

That all Missourians understand the relationship and value of plant and animal communities to our social and economic well being.

That citizens and government agencies work together to protect, sustain, enhance, restore, or create sustainable plant and animal communities of local, state, and national significance.

## **WHAT WE BELIEVE**

**All citizens are important and we value their trust, regardless of their point of view:** All Missouri citizens deserve respect. Our job is to listen, understand, and personally deliver programs and services in a manner that promotes relationships based on trust.

**Excellent public service is what we will provide:** We are committed to providing excellent public service in a manner that benefits fish, forest, and wildlife resources and encourages citizens to be active participants and conservationists.

**Fairness, objectivity, sound science, integrity, responsibility is what we expect of ourselves:** Our decisions and behavior will be based on fairness, objectivity, and the best scientific information; we will act with the highest degree of integrity and ethical consideration.

**Employees are the Department's most important resource:** All employees deserve a safe, high quality work environment that promotes opportunities for professional and personal growth, teamwork, and individual respect.

## **INTRODUCTION**

### **History of Strategic Planning in the Department of Conservation**

The Conservation Commission is vested by the state constitution with responsibility for “The control, management, restoration, conservation and regulation of the bird, fish, game, forestry and all wildlife resources of the state...”. Under the watchful eye of Missouri citizens, this mandate has guided the Department and remains a model for all state conservation agencies. Indeed, over the past 66 years we have witnessed many fish, forest, and wildlife management success stories, most of which can be attributed, at least in some way, to the forethought and courage of those who believed in the idea of a stable, non-political Conservation Commission. In 1976, the citizen-approved 1/8 of one percent sales tax earmarked for the Department began a new era of conservation in Missouri. Stable funding would now make long range planning a possibility and Department accountability to all citizens of the state would become increasingly important.

In 1977 the Department’s “Design for Conservation” provided strategic direction for the agency and its programs. “Design” was created in response to changing social values, demands, and other pressures on the fish, forest, and wildlife resources of the state, and for 10 years the goals of “Design” guided the agency through an exciting period of growth. In 1989, the first of two five-year strategic plans was developed. The FY 1990-1994 plan focused on the need to develop a planned management system for determining Department priorities. The “Strategic Plan” and subsequent operational plans guided the agency through a time of increased emphasis on public lands and resources, and stressed the development of additional programs, especially in the area of conservation education. The FY 1996-2000 plan highlighted social changes, citizen involvement, partnerships, aquatic resources, technology, and private land issues. A change in agency leadership in 1997, as well as many organizational changes, effectively rendered the FY 1996-2000 plan obsolete by the end of that year. The FY2000 and subsequent strategic plans have been patterned, with slight variations, after the described “Process and Plan,” which follows.

In 1995, Governor Mel Carnahan signed the Commission on Management and Productivity (COMAP) Implementation Order 94-04. This Order mandated the adoption of an integrated strategic planning process by all state agencies and creation of an Interagency Planning Council (IPC). The Department has been an active participant on the Council and an original member of the COMAP. During this time, the Department’s FY 1996-2000 strategic plan was the only “working” strategic plan in state government and was a model for the IPC as it developed a state strategic planning model and guidelines.

## **The Process and Plan**

Influenced by changing philosophies and trends in strategic planning for government agencies, the current planning process takes a slightly different approach than previous efforts. The emphasis is on key issues, results, and performance measures rather than by objectives or activities. It is also a dynamic process rather than a once every five-year event. All issues were identified and compiled by a planning team made up of the Director, both Deputy Directors, the Assistant Director, and all nine Division Administrators. All issues were reviewed by the Conservation Commission.

This Plan will be reviewed annually and progress reported to the Commission and all Department staff. Administration will be responsible for the strategic plan; however, new issues may be offered by staff input to Division Administrators at any time. The result will be a more useful and up-to-date Department strategic plan that also meets the needs of the state Office of Administration, Budget and Planning.

## **OVERVIEW**

This strategic plan is a guiding document for the Department of Conservation. Its purpose is to highlight important agency issues and to assign priority to achieving specified results. It is not designed to encompass everything the agency does or wants to do – those items are captured through various other documents, guidelines, and individual workplans. Rather, this plan is a way to communicate with ourselves and the public about some of the most urgent, or important issues facing the agency.

We view this plan and process as an integral part of how the Department does business. Results and performance measures will be monitored and reported. Issues, results, and measures will be added, deleted, or modified as necessary. Moreover, division and regional workplans and budgets should have obvious linkages to strategic issues where appropriate. The planning process and document have also been designed to meet the requirement of the state Integrated Strategic Planning Process and IPC's Model and Guidelines.

Accountability is key to achieving the strategic plan results. Summary reports will be prepared periodically to track progress. Annual planning and budgeting processes will be essential to identifying and carrying out the necessary actions required to achieve success. All Department units will be responsible for integrating strategic issues and results into their activities. Performance measures have been identified for all desired

## **KEY ASSUMPTIONS**

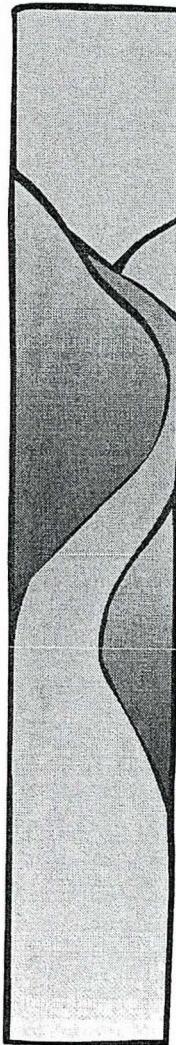
results. In some cases these numbers are surrogate measures and will be used until better measures can be developed or identified. Baseline numbers, where available, will be used for comparative purposes in future years. Data sources have been identified for all measures and specific units and individuals will be assigned responsibility for gathering and recording data.

In developing this strategic plan, a number of assumptions have been made about the resources, people, and work of the Department. While the world in which we live is constantly changing, the following key assumptions are critical to achieving the Department's mission and fulfilling its mandate. Key assumptions include:

- Missourians value fish, forests, wildlife, habitats, and natural communities, and believe in and support the fundamental premise of conservation.
- Missouri's human population will continue to grow and spread across the land increasing the struggle to protect and restore natural resources.
- There is a need for more and better information and knowledge about fish, forests, wildlife, and the people who use and enjoy these resources.
- Serious strides in conservation of natural resources must involve partnerships, cooperation, and collaboration of public and private interests.
- Private property rights are of critical importance to Missourians and must be held in high regard by the Department.
- The Department's budget will remain stable for the foreseeable future.

# MISSOURI CONSERVATION COMMISSION STRATEGIC GOALS

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- GOAL #1**      **Preserve and Restore the State's Biodiversity**
- GOAL #2**      **Inform, Educate, and Survey the Public About Conservation**
- GOAL #3**      **Help Landowners Manage Their Land for Sustainable Resources**
- GOAL #4**      **Manage Public Land so that it Invites Public Use**
- GOAL #5**      **Integrate Conservation Principles into Urban Lifestyles**
- GOAL #6**      **Seek Effective Conservation Partnerships**
- GOAL #7**      **Retain Public Support and Recruit New Participants**
- GOAL #8**      **Improve Our Business Management Systems**



*These eight strategic goals were developed and adopted by the Conservation Commission on April 19, 2000 and were reaffirmed on July 31, 2003. The goals are intended to provide general guidance and direction for the Department and staff. Further, the order in which the goals are listed is in no way intended to indicate priority.*

## ***STRATEGIC GOALS***

### ***Goal 1: Preserve and Restore the State's Biodiversity***

**Overview:** Missouri is home to a diverse array of plants, animals, and natural communities. More than 5000 species of plants and at least 20,000 animal species occur in almost 200 recognized natural communities. The state's biota includes species from adjacent biomes as well as species and communities found only in Missouri. Key to conserving the state's biodiversity is the need for an ecosystem approach which includes resource planning at a regional or landscape scale, and restoration and management of native plants, animals, and natural communities. Special emphasis on expanding the Missouri Natural Areas System and protecting unique lands and waters, critical habitats for state and federally listed species, and natural features of special interest are also critical to achieving this goal.

From species protection and restoration to hunting, fishing, and wildlife viewing, fish and wildlife populations are central to the mission of the agency. The relative health and abundance of fish and wildlife and the quality of the lands and waters where they live are good indicators of the overall health of our natural environment. In addition, some species are important to people as sources of food and recreation, and subsequently, have high social and economic values. Other species may be regarded as nuisance they conflict with human activities. The Department is committed to balancing restoration and population management objectives with societal needs as well as providing public use of these resources to facilitate resource management, outdoor recreation and enrichment of our lives through important traditions.

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### ***Goal 2: Inform, Educate, and Survey the Public about Conservation***

**Overview:** The future of conservation will be determined by the interest and actions of Missourians. Helping citizens realize or understand the importance of conservation and the value of fish, forest, and wildlife resources to our daily lives is a continuous task, and ultimately, real conservation will occur only when the people embrace these values. Differing values within our society (e.g., rural versus urban) make the challenge increasingly difficult. Urban people express widespread interest in conservation issues, yet the apparent disconnect between urban dwellers and the natural world makes it hard to interpret the meaning of their interest and real level of commitment to hard natural resource conservation decisions; decisions that may affect the urban lifestyle.

Increasing awareness and understanding of conservation will help to create a supportive and informed public. Public support is responsible for our past success. We must continue to make the public active partners in conservation by providing programs and materials that teach them conservation principles and inform them of the state of their fish, forests, and wildlife. Moreover, we must teach by example. In addition to the way we manage fish, forest, and wildlife resources and public land, we must also embrace the broader issues such as clean air, clean drinking water, energy conservation, and recycling.

### ***Goal 3: Help Landowners Manage Their Land for Sustainable Resources***

**Overview:** Historically, the Department has offered a variety of programs and services to landowners to assist them with their land management needs. Whether it be restoring lost habitat, improving the management of forest land, or managing for fish, wildlife, and recreation, the Department has worked hard to get needed information in the hands of the landowner. Ultimately, success is defined by the landowner and hinges on how well we help the landowner realize their management goals. For many, restoring and preserving habitats, fish, and wildlife is enough. For others, finding the right mix of conservation practices relative to other land uses is the key. And for many, the issue is economically driven, i.e. profiting from abundant, well managed resources.

The future of fish, forest, and wildlife resources lies in the hands of the private landowner. Not only must we encourage the private landowners to invest in these resources, but we must help them invest in a manner that enhances the quality and relative abundance of the resources over time.

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### ***Goal 4: Manage Public Land so that it Invites Public Use***

**Overview:** A key element to conservation is public use. If people are able to benefit directly from the presence of fish, forest, and wildlife resources, they will be more likely to support resource needs and management. Conservation areas and facilities are the most important linkage between the people and the resources; therefore, it is vitally important that our public lands and facilities invite public use. This means that lands and facilities must be relatively accessible, safe from undesirable elements, and managed and governed in a way that people are able to pursue conservation related activities conveniently. Fish, forest, and wildlife habitats on public lands should be managed in exemplary ways that support abundant fish and wildlife populations and serve as demonstrations of conservation stewardship. Opening and closing times for areas and facilities, the kinds of uses allowed or limited, and the manner in which we promote public use can all have an effect on whether the public feels comfortable and invited or not.

While conservation areas cannot be all things for all people, offering an array of opportunities compatible with resource protection and management is critical. Moreover, we must do so in a friendly, engaging manner. People should want to visit and use our areas.

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### ***Goal 5: Integrate Conservation Principles into Urban Lifestyles***

**Overview:** Two of the biggest challenges for the future are 1) how to manage fish, forest, and wildlife resources in and around Missouri's urban areas and 2) how to keep urban residents connected to the natural environment. Urban growth and development are gobbling up habitat and natural communities, thereby eliminating or displacing many species. The result is a decrease in biodiversity, loss of stream habitat, reduced water quality, and often an increase in human/wildlife conflicts. Planned growth and development with consideration to green space, riparian corridors, storm water runoff, and other fish, forest and wildlife needs can address urban residents' desires and quality of life issues.

Related is the need to keep conservation and the natural environment fresh in the minds of urban dwellers. If people lose contact with the land, they will barely notice or care about potential negative impacts and fail to take preventative action. Moreover, a citizenry that is informed about environmental issues can make better decisions about the future of fish, forests, and wildlife in our state.

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### ***Goal 6: Seek Effective Conservation Partnerships***

**Overview:** Achieving the desired level of success is contingent upon our ability to create effective partnerships and seek grant opportunities. Single programs or agencies cannot be all things to all people, nor do they have all the necessary resources. Sharing resources, including creativity and innovation, allows us to have a greater effect, whether it be on the landscape, in the classroom, or in the meeting room where decisions and policy are made. A willingness to seek out financial and intellectual partnerships will result in positive, synergistic reactions and interactions, and ultimately better serves the public interest.

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### ***Goal 7: Retain Public Support and Recruit New Participants***

**Overview:** Providing a variety of high quality, conservation related recreational opportunities is a critical part of the Department's mission. Hunting and fishing are important Missouri traditions. Camping, hiking, canoeing, and wildlife-watching are major outdoor activities for many Missourians and visitors to the state. Moreover, all of these activities and more carry with them a significant positive impact to the state's economy. Rural and urban people often differ greatly in their expectations, and therefore, look for different levels of access and amenities. People of all walks of life also differ in their definition of a quality recreational experience. Age, gender, ability, and cultural differences also influence participation and expectations, and will continue to challenge us as we look for ways to provide opportunities and balance resource management needs.

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### ***Goal 8: Improve our Business Management Systems***

**Overview:** The last decade taught us that success is contingent upon our ability to change and respond to change. Technology and changing public and employee expectations require us to constantly seek new ways of managing and organizing our work processes and decision-making. Moreover, enhanced communication, teamwork, and participatory management will generate innovative approaches to how we deal with conservation issues.

However, the ultimate success or failure of the Department hinges on the quality, character, and dedication of the Commission and its employees. Department support of employee needs such as adequate training, equipment, and facilities is critical to our effectiveness. Equitable compensation and contemporary benefits enhance the relationship between employer and employee and help to enrich the organization and the personal lives of those who choose the Department as their professional home.

## **Program Areas & Definitions**

**PUBLIC RESOURCES MANAGEMENT** Management of the state's publicly-owned fish, forest, and wildlife resources, including: statewide fish and wildlife population management; species and habitat planning; environmental review; assisting and working with other natural resource management and regulatory agencies; forest resource management; fish and wildlife habitat management; natural community management and restoration; and maintenance activities on areas owned, leased, or managed under cooperative agreement by the Department.

**LANDOWNER SERVICES** Providing private landowners with the information, technical guidance, and financial assistance they need to achieve their fish, forest, and wildlife management objectives and be good stewards of these resources; and working with other landowner service agencies and organizations (NRCS, SWCD, Farm Bureau, etc.) to effectively and efficiently deliver these services.

**REGULATION AND ENFORCEMENT** Enforcement and administration of the rules and laws of the Conservation Commission and statutory laws which the Department has authority to enforce; management of human activities in order to promote wise use, equitable sharing, and protection of the resources while ensuring public safety; training of staff on Conservation Commission rules and statutory laws; and determining compliance.

**INFORMATION AND EDUCATION** Educating Missouri's citizens about fish, forest, and wildlife resources, including how to use and enjoy them; enhancing public awareness and understanding of conservation issues; fostering public understanding of fish, forest, and wildlife management practices; involving the public in fish, forest, and wildlife management and conservation; and fostering public awareness of and support for the Department, its programs, and actions.

**RESEARCH, SURVEYS, AND MONITORING** Research projects; fish, forest, and wildlife inventories and surveys; management evaluations; long-term resource monitoring; and public use and attitude surveys.

**GENERAL AGENCY OPERATIONS** Department internal functions, including personnel management and development, fiscal activities, office management and maintenance, communications, information management, equipment maintenance, strategic and operational planning, and other activities that support more than one program area at a time (i.e., activities that are not directly and completely related to achieving objectives under a single program area).

# **STRATEGIC ISSUES**



**Program Area:** Public Resources Management

**Strategic Issue:** MDC area facilities/infrastructures maintained and operated in a way that invites public use  
(Strategic Goal: 4)

The Missouri Department of Conservation owns or leases 974,000 acres of land. These areas range from large blocks of forest or prairie to small boating accesses on lakes, reservoirs and streams. Each area has facilities which require maintenance commensurate with the primary purposes for which the land is managed and in recognition of the level of use and type of facilities on the area. The public looks to MDC areas/facilities for a variety of opportunities, from hunting and fishing to hiking and bird watching. Each user group has different needs and expectations of what should be provided on Department areas to meet their particular interests. The one thing they all have in common is a desire that MDC manage Department areas to meet *their* particular interests.

Keeping up with changing public expectations and needs requires frequent monitoring and input from area users. Input is obtained via surveys, public forums, or direct contact with constituents. There is also a need to complete a comprehensive long-range projection of infrastructure repair and renovation to ensure adequate funding. Vandalism of MDC facilities can be reduced with additional surveillance, investigation and enforcement.

Maintenance is currently being conducted through use of Department staff, contracting, and volunteers (adopt-a-trail, etc.). In many locations existing levels of maintenance are not meeting the needs or expectations of the public. Consistency of maintenance across the Department is also lacking. While some area facilities are well maintained throughout the year, others of equal importance or demand get limited attention on a seasonal basis. There is a need to ensure a combination of methods (staff, contracting, and volunteers) are used to get priority work completed.

**Desired Results**

- ❖ Well-maintained and operated facilities and infrastructure that invite suitable public uses and appeal to a broad and diverse public.
- ❖ Reduced vandalism and property damage to facilities and infrastructure.

**Performance Measures**

- ✓ Number of incidents of vandalism and the amount of funds spent for repairs.
- ✓ Public complaints and concerns regarding conservation areas/facilities.
- ✓ Number and distribution of public forums held to monitor expectations and needs, and obtain feedback on area management.
- ✓ Number of on-site visits and reviews of area management and facility maintenance on selected areas each year.

**Why are these performance measures important?**

Appearance and condition of Department areas and facilities often define how the public views our overall success of program delivery and meeting their expectations. In many cases, our areas are the most visible “product” taxpayers’ money produces.

**What factors influence these performance measures?**

There must be adequate fiscal and personnel resources to implement a long-term infrastructure plan, and consistent standards for maintenance of facilities/infrastructure in conjunction with the purpose for which an area is managed.

**Is there information or data supporting this strategic issue (e.g., trend analysis)?**

A facility/infrastructure survey has been completed. However, the long-term plan for repair and renovation has yet to be completed. Public forums have been held around the state, which produced a sense of public desire and satisfaction with public land maintenance. No formal process is in place to track amounts of vandalism damage or public comment received on specific conservation areas.



**Program Area:** Public Resources Management

**Strategic Issue:** Deer populations balanced with the interest and tolerance of landowners, hunters, and the general public  
(Strategic Goal: 1)

Missouri's deer resource provides significant enjoyment to a broad array of citizens. It also serves as a prominent economic engine benefiting numerous aspects of the state's economy; for example meat processors, sporting goods sales and manufacturers, restaurant and motel owners, rural real estate sales. Deer hunters are also the largest single group of hunting participants. Most of Missouri's deer herd resides on private lands. Private landowners overwhelmingly report they enjoy "seeing" deer on their lands. Similarly, deer viewing is one of the most important wildlife viewing activities on public lands. Missouri's landowners, as well as deer enthusiasts, also recognize the need to balance deer abundance with property owners' tolerance for crop damage, damage to gardens and shrubs, and deer-vehicle accidents.

Deer harvest management strategies impact deer abundance and thus they also impact viewing and hunting opportunities. The management of deer on public and private lands should address the diverse desires and expectations of Missourians. The quality of the deer hunting experience is also important to a significant and growing proportion of hunters. Approaches to achieving the desired balance in deer abundance, while continuing to meet hunter expectations for quality, will involve the evaluation of non-traditional harvest strategies.

**Desired Results**

- ❖ A majority of landowners in northern Missouri report the number of deer is "about right" according to landowner surveys.
- ❖ Deer hunters are satisfied with and support the herd management program.
- ❖ A balanced deer herd sex ratio resulting from reducing antlerless deer numbers and thus increasing the proportion of the population composed of bucks.
- ❖ A public lands deer management strategy in each MDC administrative Region that ensures the desired diversity of deer hunting and viewing opportunities.
- ❖ Public support for continued evolution of deer harvest management through strategies that ensure future harvest regulations are both effective in managing deer numbers and acceptable to landowners and hunters.

**Performance Measures**

- ✓ Increased antlerless deer harvest in northern Missouri, particularly on private property.
- ✓ Landowner, hunter, and general public attitudes that reflect support of the deer management program.
- ✓ Increase pre-hunt proportion of male deer in northern Missouri deer management units from the current level of approximately 40% to a level 45% or higher.

**Why are these performance measures important?**

By understanding how landowners, deer hunters, and the general public react to an array of potential management strategies and how those strategies affect harvest, we will be able to weigh competing options for meeting herd management goals while ensuring we formulate regulations that are well accepted. Achieving greater balance in buck:doe sex ratios should result in overall reduction in deer numbers while meeting deer hunter interests in increasing the number of adult

bucks in the herd. Ensuring a diversity of deer hunting/viewing options on public lands while incorporating landowner concerns will provide for increased and targeted recreational opportunities.

**What factors influence these performance measures?**

Securing the appropriate level of staff time necessary to assess deer-related recreational need, constituent attitudes, and associated monitoring of harvest strategies.

General public acceptance of deer harvest management strategies.

Willingness of agency staff and the public to embrace innovative deer harvest strategies.

Agency ability to communicate with and develop support among the deer hunting public.

**Is there information or data supporting this strategic issue (e.g., trend analysis)?**

The primary means of managing deer populations is through hunting. Deer hunter numbers over the past 5 years are static, at about 425,000. The average age of deer hunters continues to increase, and as hunters age their willingness to harvest multiple deer has been shown to decline. Substantial recruitment of new deer hunters is not expected to occur. Attitudes and preferences of deer hunters are also changing, with a much greater focus on hunting “quality” which is often directly related to harvest opportunity for adult bucks. Concurrent with these changing attitudes, hunter willingness to harvest antlerless deer must be maintained. Innovative approaches to harvest management need to be explored to ensure hunter satisfaction with program direction and support of harvest goals remains high. Existing information from check stations and attitudes surveys provide the basis for comparison and on-going measures of changes in harvest, population status, and attitudes of hunters and landowners.



**Program Area:** Public Resources Management

**Strategic Issue:** Managed forests on MDC lands that promote forest health, sustainable wood products, wildlife habitat, and ecosystem restoration  
(Strategic Goal: 1)

Conservation Areas with forested lands provide many benefits including wildlife habitat, species diversity, forested landscapes and forest products that provide economic benefit to communities and Missouri's economy. The forests of Missouri are aging and are susceptible to a variety of forest health issues including oak decline, red oak borer, gypsy moth and other insects and disease outbreaks. All these factors affect species diversity, ecosystem restoration and economic factors that are of concern to residents of Missouri. Conservation area forests are not immune to these same factors and causal agents. Timber harvest, prescribed burning, thinning and other silvicultural treatments are needed to reduce and prevent many of the damaging effects of aging and insect and disease damage. All treatments must be done in consideration of social concerns, wildlife habitat needs, and ecosystem restoration through implementation of watershed best management practices (BMPs).

**Desired Result**

- ❖ Conservation forest lands where forest management is used to promote wildlife habitat, forest health, species diversity, provide a balance of forest stand age classes, and reduce the impact of forest health agents (such as insects and disease) while contributing a stable sustainable flow of forest products to the benefit of the local and Missouri economies.

**Performance Measure**

- ✓ Acres treated will be based on a 15-year re-inventory schedule. MDC manages forest land on an average rotation cycle of 100 years. This will be measured on the basis of acres scheduled for inventory of 27,000 to 33,000 acres per year, with stand condition and habitat needs identified through inventory, resulting in implementation of treatment on approximately 20 percent of the inventoried acres.

**Why is this performance measure important?**

Areas identified for treatment are based on stand and compartment needs as determined by a comprehensive forest inventory. These needs include opportunities for wildlife habitat improvement, species diversity, ecosystem restoration and resolution of forest health issues, while maintaining forest growth and removal at a sustainable level. Forest management is based on long-term inventory over the life of a forest rotation. These factors are why the performance measure is important, because once on schedule, MDC can insure a sustained maintenance of forest condition and products.

**What factors influence this performance measure?**

Acres inventoried and subsequently treated are influenced by many factors, with adequate personnel staffing and availability of funding to insure completion of inventory as scheduled and implementation of needed treatment being a critical factor. Other factors include: competing demands for staff time and operating budgets, weather and other emergency needs such as extended wildfire seasons in Missouri, and emerging/increasing forest health issues that would affect schedules. Changing priorities within the MDC also can affect this performance measure.

**Is there information or data supporting this strategic issue (e.g., trend analysis)?**

Historic harvest, inventory and acres treated data does exist and will be used to determine sustainable levels of treatment as well as performance. Forest health conditions are monitored on an annual basis in Missouri. Forest management is a long-term proposition, planning and investing today will effect the overall forest condition 100 years from now. Sustainability of our forests will insure that public needs and expectations will be met. Conservation Areas have the ability to provide for a wide variety of forest products and services as they have in the past.



**Program Area:** Public Resources Management

**Strategic Issue:** Increased numbers and distribution of invasive species threaten Missouri's resources, natural communities, and native species  
(Strategic Goals: 1, 2, 6)

Concerns about invasive species have been intensified by experience with purple loosestrife, zebra mussels, gypsy moths, and a number of other critical environmental threats. The approach in many states, Missouri included, has been fragmented, and a more coordinated approach is needed to achieve the desired results. This will involve coordinated efforts for detection (surveys and monitoring), policies and regulations, prevention / education, and more complete research into these threats. A key first step will be to establish invasive and exotic species as a Department priority, identifying lead divisions / individuals and elements of policy, surveys and monitoring, and management needed to ensure a coordinated approach.

### **Desired Results**

- ❖ Prevent the introduction of new invasive species.
- ❖ Prevent further spread of current invasive species.
- ❖ Eliminate or reduce current invasive species.
- ❖ A coordinated approach among MDC divisions and external partners, through proactive planning, for the most efficient and effective process to address invasive species threats.
- ❖ Increased awareness among MDC Divisions, other statewide natural resource organizations, and the general public concerning the threats of invasive species.

### **Performance Measure**

- Geographic extent and frequency, number, or magnitude of invasive species (measures of success would be reduced extent or numbers or complete elimination of certain invasive species).

### **Why is this performance measure important?**

Invasive species represent a major threat to native fish and wildlife and natural communities. Monitoring the extent of invasion and understanding impacts on Missouri's native species will be essential to developing effective management strategies.

### **What factors influence this performance measure?**

The development of a planning document and implementation schedule will require a statewide and interdivisional commitment from MDC administrators and staff. Commitment and support would include the obligation of a minimum of 10%-20% of several staff members' time in several divisions, and/or a significant obligation of time (75%-100%) from a dedicated staff member. The willingness, understanding, and commitment to address the issue from other state agencies and organizations will be essential to achieving these performance measures. Clear policy direction, legislative support, adequate funding, public awareness, effective methods of control, and evaluation of progress towards reducing invasive species threats all will be essential.

### **Is there information or data supporting this strategic issue (e.g., trend analysis)?**

In some instances (e.g. purple loosestrife), the incidence and extent of invasion and the degree to which control programs have been successful are well documented. This is the exception, and planned approaches for evaluation and monitoring are needed.





**Program Area:** Public Resources Management

**Strategic Issue:** Balancing quality fish populations and aquatic biodiversity  
on MDC-managed public waters  
(Strategic Goal: 1)

Public waters include a wide variety of standing and flowing waters, some of which are important to threatened and endangered species. Most of these waters provide quality fishing for 1.2 million resident and non resident anglers and account for over 13.2 million days of angling use statewide. In addition, they provide habitats for Missouri's diverse populations of aquatic insects, crayfish, mussels, and fish.

MDC has long been a leader in quality fish management. The development of length limits, catch and release programs, focused aquaculture efforts, special management areas, and other techniques have been used to provide levels of opportunity and success that anglers accept and appreciate. Acquisition and development programs have provided anglers more places to fish, thus avoiding a concentration of fishing pressure that leads to a decline in fishing quality. The ever-growing specialization of anglers has also led us to develop specific plans to meet their needs (e.g., trout, bluegill, walleye, muskellunge, and catfish plans).

At the same time, the diversity of all aquatic organisms is an MDC concern. Missouri's public waters contain a large number of species, some found nowhere else on earth. Watershed land use changes and urbanization threaten aquatic biodiversity; management emphasis strives to improve positive habitat criteria while targeting watershed erosion and sedimentation, sand and gravel dredging, riparian clearing, construction activities, and many other man-induced changes that have an adverse impact on biodiversity

### **Desired Result**

- ❖ MDC-managed water bodies containing the types and quality of sport fish populations that anglers accept and appreciate, while maintaining healthy communities of aquatic species, including fish, aquatic insects, crayfish and freshwater mussels.

### **Performance Measures**

- ✓ Sport fish populations meeting quality fishing indices as defined in individual lake and river management plans.
- ✓ Fish, invertebrate, crayfish and mussel diversity indices that are optimal, realistic and stable.
- ✓ Threatened or endangered aquatic species removed from T&E lists.

### **Why are these performance measures important?**

Sampling sport fish populations and measuring various quality fishing population indices, measuring fish, invertebrate, crayfish and mussel diversity, and obtaining physical and chemical stream habitat information all directly measure what we are actually trying to produce – quality sportfish populations and a diverse aquatic biota.

### **What factors influence these performance measures?**

Sport fish and diversity sampling efforts can be affected by weather, staffing (i.e., inadequate sampling effort), declining watershed land use, invasive species, water quality problems, avoiding conflicts with area users, and a variety of other abiotic and landscape level factors.

**Is there information or data supporting this strategic issue (e.g., trend analysis)?**

Regional lake and stream electrofishing and trapnetting results show the status of sport fish populations relative to quality fish population parameters; fish, mussel and crayfish databases, Resource Assessment and Monitoring (RAM) trend data and Stream Team invertebrate databases, as well as related physical and chemical information, provide information on aquatic diversity levels and habitat quality.



### Program Area: Public Resources Management

**Strategic Issue:** Landscape changes continue to degrade critical habitat and natural communities resulting in the decline of a wide variety of fish and wildlife

(Strategic Goal: 1)

As urban areas have expanded and land-use patterns have changed, large, continuous blocks of similar habitat and the systems associated with those habitats have been altered. Large expanses of habitats have been fragmented and natural processes associated with these ecosystems have been eliminated or reduced in both size and frequency. Populations associated with ecosystems that evolved around frequent disturbance events and those requiring landscape-level blocks of habitat and the processes associated with those habitat blocks have decreased in numbers (i.e. quail, prairie-chickens, collared lizards, etc).

### Desired Result

- ❖ Increased populations and enhancement of natural communities through targeted habitat manipulations.

### Performance Measures

- ✓ Positive population trends at local and watershed scales.
- ✓ An increase in the number and size of natural communities.

### Why are these performance measures important?

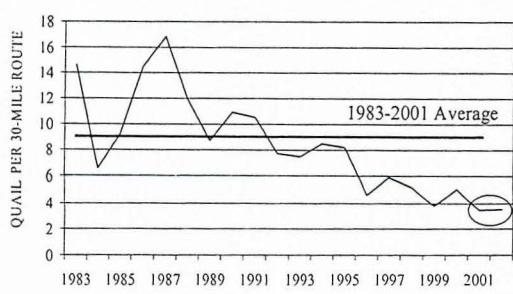
Positive population trends at local levels indicate an increase in those species targeted for population enhancement. Increasing population trends at a watershed level indicate an understanding of and a positive impact on landscape level processes.

### What factors influence these performance measures?

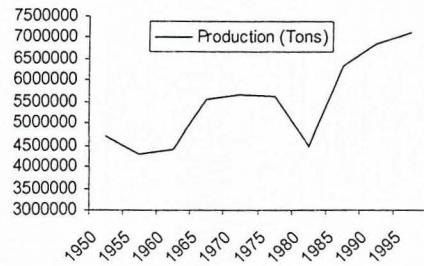
Populations of migratory species can be impacted by events in other geographic areas. Landscape level factors could mask the effects of positive habitat enhancements on localized wildlife populations and systems.

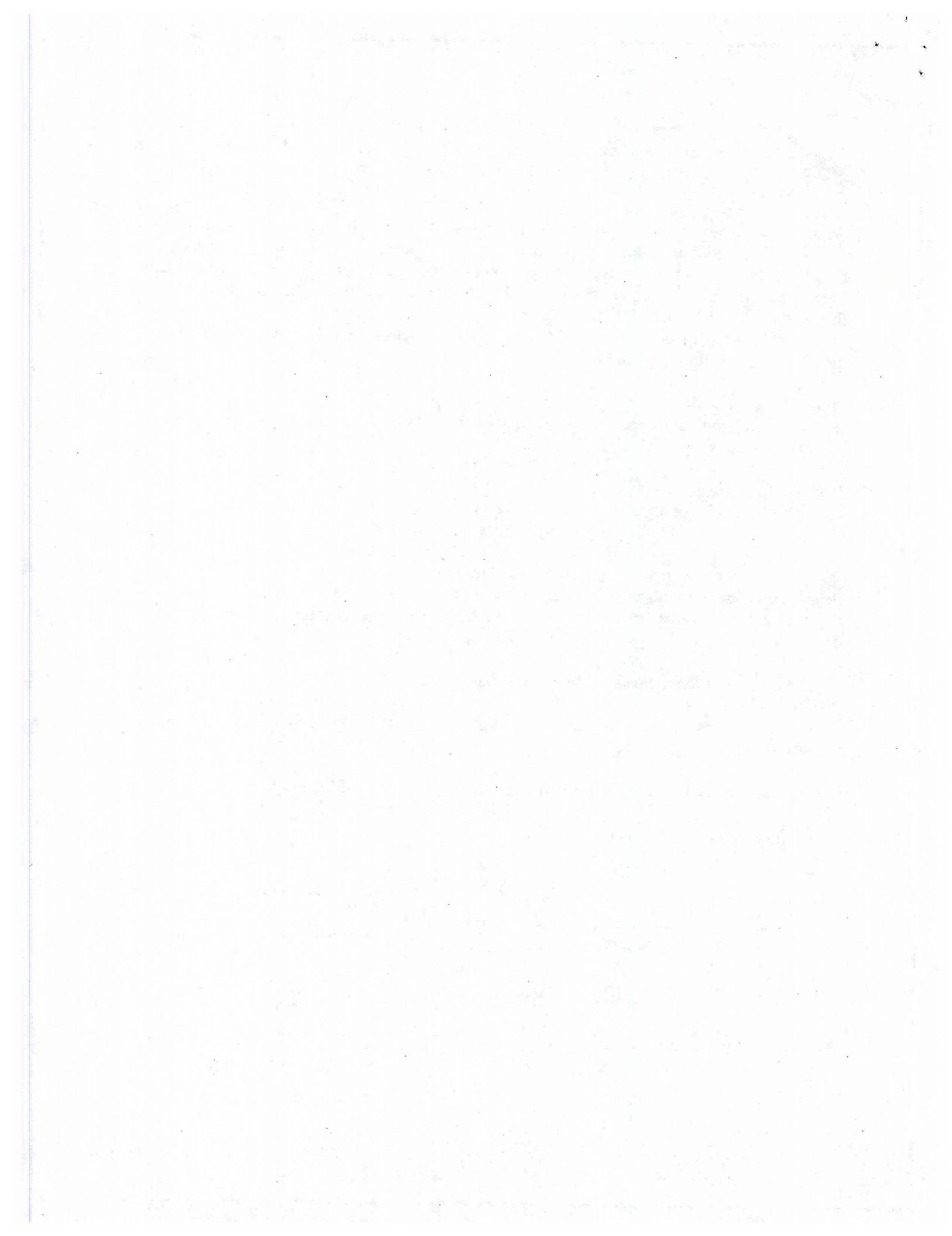
### Is there information or data supporting this strategic issue (e.g., trend analysis)?

AGENTS' AUGUST ROADSIDE QUAIL SURVEY  
1983 - 2002



Missouri Grass/Hay Forage Production







**Program Area:** Public Resources Management

**Strategic Issue:** Declining water quality/quantity affects habitat and reduces public opportunities  
(Strategic Goals: 1, 2, 3)

The quality and quantity of Missouri's aquatic resources continues to be adversely affected by land use practices and water resource projects. This trend will continue with increased population growth, industrialization, urbanization, and expansion of chemical dependent agricultural practices. Because high quality water is essential for all life and provides a tremendous amount of recreation for people who enjoy swimming, fishing, boating and sightseeing, it is incumbent on the Department to protect and enhance the integrity of this resource. Failure to address this issue will result in an erosion of the public trust in addition to the loss of critical resources and aquatic species. The development of in-stream flow standards and policies, and a comprehensive state water law are key to a successful program dedicated to reducing aquatic resource deterioration. Working together with the Missouri Department of Natural Resources on the development and enforcement of rules and regulations affecting stormwater runoff, confined animal feeding operations, in-stream gravel mining, urban development, and other threats to the quality of aquatic resources is crucial. Priority should also be given to validating the effectiveness of forest management BMPs on water quality.

### **Desired Results**

- ❖ Improved water quality in Missouri's public waters.
- ❖ Reduced stream erosion, sedimentation and other forms of habitat degradation.

### **Performance Measures**

- ✓ Number of streambank erosion control projects installed.
- ✓ Number of feet of riparian corridor restored or re-established.
- ✓ Number of pollution incidents and fish kills on public waters.
- ✓ Physical, chemical and biological characteristics of the water body maintained or improved.
- ✓ Number of county and city governments adopting environmentally friendly development regulations.
- ✓ Number of legislative and administrative efforts to develop, improve, or maintain statutes and agency regulations that protect water quality and water quantity.

### **Why are these performance measures important?**

- Streambank erosion is a significant contributor of gravel, turbidity, and sediment that is adversely impacting MO stream resources.
- Streambank erosion is a key concern of Missouri landowners with a stream or river flowing through their property.
- Riparian corridors contribute to stream health by filtering pollutants, absorbing and dissipating flood flow energy, and reducing water temperature through shading.
- Pollution incidents and/or fish kills provide a real measure of ongoing efforts to protect water quality.
- Physical (temperature, land use, etc.), chemical (dissolved oxygen, nutrients, pH, etc.) and biological (fish, benthic invertebrate diversity) characteristics determine the ultimate quality of any particular water body.

- Federal, state and local regulatory authority to protect and enhance water quality and quantity is the direct responsibility of other agencies and not the Department's, yet the extent to which statutes, regulations, and ordinances protect and improve water quality and quantity has an important and direct influence on habitats and the success of Department programs.

**What factors influence these performance measures?**

- The current amount and degree of abuse, the extent to which BMPs are used on public and private land in the watershed, and the extent of urbanization all determine the extent to which water quality can be maintained or improved.
- Availability of funds (e.g., NRCS's Environmental Quality Incentive Program [EQIP], Riparian CRP, MDC cost sharing, etc.) to correct problems that contribute to water quality degradation.
- MDC staff (Fisheries, Private Land Services, and Design & Development) must have the time and resources to work with landowners to design and provide assistance in installing projects.
- Landowners who are willing program participants in streambank, riparian and water quality projects.
- Availability of MDC and DNR staff to report, prosecute and enforce water quality violations.
- The willingness and aggressiveness with which Stream Teams and other citizens are involved in fish kill reporting, water quality projects, problem identifications, and solutions.

**Is there information or data supporting this strategic issue (e.g., trend analysis)?**

- MDC Stream Technical and Regional staff have developed a variety of streambank erosion control techniques.
- Annual reports provide a historical record of erosion control projects completed.
- Available GIS data could be used to determine total number of stream miles throughout the state that lack an adequate riparian corridor.
- MDC-generated annual reports provide a detailed, historical record of pollution incidents that have been investigated.
- Stream Team and Volunteer Water Quality Monitoring data provide information on physical, chemical and biological measures in many watersheds across the state.
- RAM data provide long term trend information in representative watersheds.



**Program Area:** Public Resources Management

**Strategic Issue:** Wildlife diversity and natural community management/restoration on MDC lands  
(Strategic Goals: 1, 4)

Conservation areas provide wide-ranging benefits to Missouri's citizens, ranging from places where citizens may hunt, fish, and enjoy nature to natural areas and vital habitats for endangered plants and animals. Our public lands are a reservoir of species and virtually all conservation lands require active management to sustain habitat for plants, fish, and wildlife. Unmanaged native prairies will succeed to forests, native plant communities may be invaded by exotic species, and increased sedimentation rates associated with some agricultural practices reduces the quality of our lakes and streams. In order to provide and maintain biodiversity we need to emulate natural processes to maintain species or habitat conditions will become homogeneous. Due to the interruption of natural processes and habitat fragmentation resulting from changing land-use patterns, public land managers have to understand local and landscape level systems and process. Regardless of whether the objective is to establish desired ecosystems, plant communities, or successional stages, balancing public use and expectations along with ecosystem needs and natural succession provides a moving target for public land managers.

### **Desired Result**

- ❖ Conservation areas where habitats are managed in efficient and cost effective ways that balance wildlife diversity goals and biological capabilities of the areas at both local and landscape-levels with public use objectives.

### **Performance Measures**

- ✓ Management treatment acres for savanna, grassland, glade, wetland, and forest
- ✓ Management treatment acres for cropland
- ✓ Maintain or increase acres in the natural areas system
- ✓ Increase acres of natural communities added to the Natural Heritage database
- ✓ Management treatment acres on natural areas

### **Why are these performance measures important?**

Area of treatment (reflected in acres) indicates levels of critical management activity that are necessary for most MDC habitat and natural area management efforts. Natural community acres reflect the recovery of systems to natural community status.

### **What factors influence these performance measures?**

Acres impacted could be influenced by weather, staffing, interdivisional cooperation, equipment availability and suitability, public input, competing demands for staff time and operating budget.

### **Is there information or data supporting this strategic issue (e.g. trends analysis)?**

Indices exist to support the following statements: a.) early successional wildlife species are declining, b.) exotic species are increasing threats to aquatic and terrestrial habitats, c.) grassland acres are being replaced by forested acres in the formerly prairie regions of the state, and d.) generalist plant and animal species are increasing while habitat specialists are declining.





**Program Area:** Landowner Services

**Strategic Issue:** Lack of forest management on non-industrial private forest lands (NIPF)  
(Strategic Goals: 3, 6)

Forestry, and the forest related industry of the state, is steeped in heritage and tradition. Some 14 million acres of the state are in some form of forest habitat, and fully 82% of that acreage is in private ownership. Missouri's forestland is vital to a diverse array of wildlife, plays a critical role in sustaining healthy watersheds, and currently supports a 4.7 billion dollar industry. The most serious threat to the long-term sustainability of Missouri's non-industrial private forest land is the lack of proper and active management. Numerous reasons are contributing to the cause of this important issue: landowners are unwilling or unable to manage the forest through its rotational life; forest management activities are costly and are not easily recouped in the short-term; with over 300,000 NIPF landowners there is a lack of adequate technical and financial assistance; most landowners lack the knowledge to make informed forest management decisions; without proper technical assistance or advice many forest stands are high-graded or over harvested compounding the recovery effort; currently there are not enough forestry professionals to address the need; many landowners are unable or unwilling to pay a forestry consultant for activities which are provided free by MDC; many consulting foresters are reluctant to engage in activities such as long-term planning or pre-commercial harvesting because they are not money generating activities. Current Farm Bill programs address the need for forest management through programs such as the Forest Land Enhancement Program (FLEP). Developing landscape scale strategies to help NIPF landowners actively carryout forest management will require an integrated and coordinated effort among Federal, State and private stakeholders.

**Desired Result**

- ❖ Increase to 10% (currently 5%) the amount of Missouri's forested landscapes managed for the long-term sustainability of wood products and critical habitats.

**Performance Measure**

- ✓ Acres of prescribed management applied.

**Why is this performance measure important?**

The true success of private land programs is manifest in the changed attitudes and action of landowners. Landowner participation can be measured, however, attitudinal changes are difficult to quantify. Success can only be measured in the number of acres brought under prescribed management.

**What factors influence this performance measure?**

The economy, land values, timber values, landowner attitudes, budgets at both the federal and state level.

**Is there information or data supporting this strategic issue (e.g. trend analysis)?**

A number of studies have been done over the years analyzing NIPF landowners and how they manage their land. Studies have been done that reflect on landowner attitudes, knowledge about assistance programs, why they own forest land, and their long-term goals.



**Program Area:** Landowner Services**Strategic Issue:** Decline of watershed health in priority watersheds

(Strategic Goals: 1, 3, 5)

The health of Missouri's aquatic and terrestrial habitats is heavily dependent on the health of watersheds. In particular, watershed erosion and runoff from poorly-managed lands leads to water quality and sedimentation problems downslope and downstream, both of which have caused the degradation of stream and riparian animal habitats and communities in many areas statewide. This is especially true in urban areas; the loss of fish, wildlife and forest resources due to urban development is a widespread and growing concern. Good land management on a landscape level is essential for healthy aquatic habitats and animals as well as wildlife habitat and forests; the lack of watershed management leads to wildlife habitat fragmentation, prairie and forest conversion to non-endemic grasses and plants, and sedimentation degrading water quality and fish habitat. The multi-disciplinary effort required to work on the watershed level, the multiple stakeholders involved, and other complexities uniquely inherent to watersheds have made this work difficult, yet given the pressures that natural resources are currently under, it must be an essential part of future conservation work.

Unfortunately, current land use planning has generally failed to conserve our fish, forest, and wildlife resources. This is a statewide issue, but the pace of development in urban areas makes this more critical in St. Louis, Kansas City, Springfield/Branson, Joplin, Columbia, Cape Girardeau/Jackson, and St. Joseph. The Department must proactively identify watersheds at risk and actively engage with all partners and stakeholders to develop long-term strategies to protect and improve those of high priority.

**Desired Results**

- ❖ Department efforts focused on protecting, improving, and maintaining priority watersheds identified in each region.
- ❖ Improved water quality and aquatic habitat in Missouri's lakes and streams and improved wildlife habitat and healthy forests in the terrestrial portion of watersheds.
- ❖ Department regional staff working cooperatively with committed, involved stakeholders on watershed improvement in priority watersheds.

**Performance Measures**

- ✓ Priority watersheds identified in each region as a focus of management efforts.
- ✓ Number of conservation plans completed and being implemented for priority watersheds.
- ✓ Watershed health improved and maintained as measured by improvement indices based on RAM and GIS results.

**Why are these performance measures important?**

To address the long-term, sustainable health of fish, forest, and wildlife, a landscape level planning approach in the watershed has been recognized throughout the nation as an effective method to unite the parties concerned and bring about effective conservation. Because MDC has neither the manpower nor the money to address every watershed, those of highest priority must be identified. Development and implementation of focused, unified watershed plans are the next most crucial steps needed to conserve watersheds. Proactive steps to conserve healthy

watersheds should be high priority because preservation is much more effective and prudent than rehabilitation of degraded watersheds. RAM monitoring and GIS trend analysis, especially relating to stream health which serves as a measurable barometer for overall watershed health, should be structured to measure progress towards aquatic and terrestrial habitat improvements.

**What factors influence these performance measures?**

The current amount and degree of abused land and water, the extent to which BMPs have been installed by private and public landowners and developers, and (in urban areas) the extent of impervious surfaces can determine the extent to which improvement is possible; the more the abuse, the greater the difficulty (and cost) in improving habitats. In addition, the extent of citizen and political support for improvement, the value citizens put on the importance of environmentally friendly development, the ability to influence local governments and developers to use BMPs, as well as funding and manpower commitment from MDC and partners, are also factors influencing performance.

**Is there information or data supporting this strategic issue (e.g., trend analysis)?**

Analysis of fish community data collected over the past several decades paints a picture of continuing degradation in all watersheds. It's not a question of whether watersheds are degrading, it's a matter of determining where you can do the most good with limited manpower and funds. This will require specific analyses by region. Thanks to the first couple of years of RAM work and the fact that stream water quality is a reflection of overall watershed health, we can identify some of the most healthy watersheds in some regions using fish, water quality and physical data. Assessing the health of terrestrial habitats and sustainable forests is also possible using existing GIS databases. Other information, including surveys of urban residents and university research results, is available to help assess the extent and impacts of urban sprawl and rural development. It can also be used to provide a picture of progress made in the protection and restoration of natural resources.



**Program Area:** Landowner Services

**Strategic Issue:** Loss of fish, forest, and wildlife habitat and impacts to watershed health associated with agricultural land  
(Strategic Goals: 1, 3)

Sustainable agro-ecosystems are vital to provide food and fiber to a growing world population. About 29.9 million acres of Missouri's land base (65%), once native prairie or alluvial wetlands, are now in agricultural production. Approximately 108,000 farms produce \$4.82 billion annually in crops, livestock, poultry and aquaculture. During the last four decades, the rate of land conversion to agricultural uses and intensified production techniques have contributed to a steady decline of wildlife habitat (biological diversity) and watershed health on agricultural landscapes. Healthy and diverse agro-ecosystems are vital to all citizens, and the challenge for production agriculture and natural resource disciplines will be to restore biological diversity and preserve watershed health while maintaining agricultural productivity. Soil and water conservation have long been recognized as vital to agriculture, and in the 1996 Farm Bill wildlife conservation became co-equal with soil and water. The equal relationship among soil, water, and wildlife carried through in the 2002 Farm Bill. It will assist agricultural producers to achieve conservation goals in accordance with their broader land management objectives. The challenge for Federal, State, and non-governmental organization (NGO) partners will be to improve awareness, understanding and delivery of available programs.

**Desired Result**

- ❖ Biological diversity restored and watershed health achieved on 20% of Missouri's 29.9 million acres of agricultural land.

**Performance Measures**

- ✓ Acres of agricultural land treated to improve water, wildlife or forest resources.
- ✓ Acres of agricultural land restored to wetlands or diverse grasslands.

**Why are these performance measures important?**

Reversal of the accumulative effect of agricultural production is only achievable through change that better integrates production and conservation aspects of agriculture. The best measure of private land program success will be manifested in the future attitudes and actions of landowners.

**What factors influence these performance measures?**

Effective delivery of technical assistance to landowners, Federal funding for conservation, farm economy, and land prices, weather, public perception of conservation programs, and societal trends.

**Is there information or data supporting this strategic issue (e.g. trend analysis)?**

Historic participation in Federal Farm Bill conservation programs, including unfunded applications, show landowner interest in conservation. Periodic landowner surveys could help assess progress and landowner acceptance. In addition, the USDA reporting system (PRMS) documents conservation planning progress and accomplishments. The Natural Resource Inventory, also maintained by USDA provides long-term land use condition.





**Program Area:** Regulation and Enforcement

**Strategic Issue:** Understandable and effective regulations for public resource management

(Strategic Goals: 1, 2, 7)

The constitutional responsibility of the Conservation Commission and the Department is to manage, conserve, and regulate the bird, fish, game, forestry and all wildlife resources of the state, including property owned and used for such purposes. Regulations continue to serve a vital function in the protection, management, and restoration of many fish, plant, and wildlife species in Missouri. Changing land use patterns, demographics, special interest groups and many other pressures make management and regulation of wildlife and Department lands increasingly difficult. There is constant pressure to manage for competing interests and values. At the same time, scientific knowledge continues to expand, allowing regulating for specific results in smaller geographic areas. The result has been an expansion of regulations, both at the species level and for management of specific Department areas. The challenge is to balance the need for easily understood and enforceable regulations with the complexities of natural communities and the varied interests for resource management.

#### **Desired Results**

- ❖ Regulations that result in effective management of fish, forest, and wildlife resources.
- ❖ Regulations that are easily understood and accepted by the public, Department employees, and the courts.

#### **Performance Measures**

- ✓ Public satisfaction surveys.
- ✓ Volume of positive and negative comments received by the Regulations Committee.
- ✓ Trends in violation rates for specific regulations.
- ✓ Acceptance by court officials for prosecution efforts (conviction rates, fines assessed).

#### **Why are these performance measures important?**

Regulations must be effective to meet management objectives. They must be understandable to be accepted and enforceable. These performance measures provide some insight as to whether regulations meet those standards.

#### **What factors influence these performance measures?**

Regulations must be dynamic and capable of change to meet the changing needs of natural resources and the public.

#### **Is there information or data supporting this strategic issue (e.g., trend analysis)?**

Violation and Arrest records

Public use and attitude surveys

Regulations Committee records

Harvest estimates and population trends for regulated species





**Program Area:** Information and Education

**Strategic Issue:** Missourians' understanding of and personal connections with our fish, forest, and wildlife resources  
(Strategic Goals: 2, 7)

Missourians live in increasingly urbanized environments that provide decreasing personal connections with the animal and plant resources of our state. A healthy diversity of sustainable natural resources will only be possible if Missourians choose to support it. People are more likely to support things they understand and which have personal value. To that end, we must inform and educate Missourians about the resources that exist and what it takes to sustain them. In particular, we must create an understanding of the landscape-scale habitat needs of species (whether it's early successional habitat for quail or large, uninterrupted blocks of native grassland for prairie-chickens) and what people can do to support these. This also includes an understanding of local watershed issues and an appreciation of Missouri's natural communities. At the same time, we must increase Missourians' sense of personal connection to these resources so greater understanding is linked to public support and positive individual action.

**Desired Results**

- ❖ Increased awareness and understanding of the role Missourians play in restoring, improving, and sustaining healthy plant and animal communities. (This includes an understanding of the impact of landscape-scale changes on local populations such as quail.)
- ❖ Increased participation/interest in nature-based activities including fishing, hunting, birding, native landscaping, nature-viewing, camping, canoeing, nature photography, trapping, etc.

**Performance Measures**

- ✓ Conservation Monitor and other surveys of Missourians show positive gains in understanding of resource issues and the state of our fish, forest and wildlife resources.
- ✓ Increased sales of conservation publications (books, videos, CDs, etc.).
- ✓ Increases in the number of students taking outdoor skills courses, attending workshops, and participating in other Department programs.
- ✓ Number of hits on MDC web pages dealing with nature-based activities increases.
- ✓ Number of fishing and hunting permits increases or remains stable.
- ✓ Number of subscriptions to the *Conservationist* magazine.

**Why are these performance measures important?**

The Conservation Monitor and other surveys provide a broad and statistically significant measure of attitudes, understanding and awareness. However, all three are difficult to measure. The purchase of MDC publications shows an interest in Missouri's plants and animals and the habitats on which they depend. The Department is beginning a new expansion of outdoor skills education. Greater numbers of participants means more people have at least some hands-on connection to our fish, forest and wildlife resources. The new program will work to create more than a one-time connection. The number of hits on MDC web pages reflects a growth of interest in nature-based activities. As we work to use the website as a cost-effective way to deliver MDC materials and messages, we will also be able to monitor where our web visitors' interests lie. The number of fishing and hunting permits sold provides a measure of participation in nature-based outdoor activities. As a widely circulated source of conservation information, the

*Conservationist* magazine's potential reach is important. The subscription database will help us ensure a diverse audience is reached.

**What factors influence these performance measures?**

The frequency and number of "impressions" made by MDC staff (whether direct or indirect) and our effectiveness in getting a simple, easy to understand message to the public overwhelmed by information overload are key to influencing the public's understanding of resource issues. The number and variety of MDC publications sold depends on the effectiveness of distribution channels and the demand for these products through the public's increased interest in and participation in outdoor activities. Negative factors would include major economic downturns and competition from other products. The Department's ability to reach diverse audiences (including students) will influence the number of students taking outdoor skills courses. That ability will be limited by staffing, effectiveness of promoting the programs, and how well the programs fit with the public's time and interests. Website use is influenced by public interest, web accessibility, and content quality and relevance to their nature-based activities. The number of fishing and hunting permits sold depends on several factors, including: effectiveness of marketing to current and new users; quality of available fish and game, perceived potential enjoyment of experience; cost of the permits and consumer comfort with necessary outdoor skills.

**Is there information or data supporting this strategic issue (e.g., trend analysis)?**

That Missourians live in more urban/less rural areas has been well documented, as has been a decrease in time spent outdoors in nature-based recreation relative to other activities. Studies have also cited "limited time" as a factor in resulting in fewer trips afield for hunters and anglers. While much of the baby boom generation had firsthand experience with fish, forest and wildlife resources, the more urban/suburban youth of today not only have little direct experience but also in some cases are uncomfortable in natural settings (a hike in the woods would be as foreign to some as a walk in the desert).



**Program Area:** Research, Surveys, and Monitoring

**Strategic Issue:** Detect, monitor, and manage disease impacts on natural resources

(Strategic Goals: 1, 2, 7)

Diseases such as Large Mouth Bass Virus (LMBV), Whirling Disease (WD – trout), Chronic Wasting Disease (CWD-deer), West Nile Virus, Oak Decline, Oak Wilt and Sudden Oak Death (SOD), etc., threaten fish, forest and wildlife populations. MDC has the responsibility to establish threat criteria, monitor and detect, inform the public, and develop management/control implications and recommendations. In some cases, more information to the public may help with faster or better management and control, or a reduced incidence, and may garner support for necessary regulations. To effectively manage fish and wildlife diseases, strategies will be needed to 1) identify and prioritize disease threats, 2) monitor diseases incidence and magnitude, 3) work with partners from other agencies to ensure public awareness, knowledge, and support, 4) predict management implications for private and public lands and waters, 5) develop management recommendations for private and public lands and waters, and 6) ensure healthy hatchery fish stocks to reduce the likelihood of disease transmission to wild fish populations.

### **Desired Results**

- ❖ Healthy forests, fish and wildlife populations.
- ❖ Capability for disease detection, with controlled and/or manageable impacts on forest, fish and wildlife resources.
- ❖ Well-informed, supportive publics, regarding management recommendations and regulations.
- ❖ Regulations/management practices that reduce risk of introducing diseases to Missouri's natural resources.
- ❖ Regular monitoring at appropriate level for disease incidence.

### **Performance Measures:**

- ✓ Number of management recommendations, plans and regulations formulated.
- ✓ Number of workshops presented, publications developed, alerts to/with other agencies or the public.
- ✓ Increased public awareness/support/knowledge of the issues.
- ✓ Increased public awareness/support/knowledge for proactive or reactive management needs.
- ✓ Decreased disease incidence, or numbers of individuals affected (not necessarily under our control).

### **Why are these performance measures important?**

The performance measures are only an indication of the effort that we can predict at this time.

### **What factors influence these performance measures?**

Measures may be affected by the relative rarity or commonness of the disease or resource in question. Disease outbreaks are difficult to predict, given the variable nature of environmental stressors to forests, fish and wildlife. Measures that involve the severity or number of incidences may be out of our control. Providing workshops, publications, news releases, and working well with partners does not necessarily ensure the measure of success we achieve with improving public knowledge, awareness, support, or willingness to adopt a recommended management practice. Measuring an increase or decrease in incidence, severity, or even in public

awareness/support implies that we would also collect baseline information first, to later determine what change has occurred.

**Is there information or data supporting this strategic issue (e.g., trend analysis)?**

MDC currently monitors for detection of LMBV, WD, CWD, and oak decline, as well as a variety of invasive pests, and MO Dept. of Agriculture is monitoring West Nile cases. We have data from our hatchery system re: LMBV and WD, from harvested deer in the case of CWD, and from our Forest Health database in the case of all damage agents to forests, such as insects, diseases, tornados, ice storms and other abiotic factors. (Some of this could be shown using maps or tables that already exist, or can be created from existing data)



**Program Area:** Research, Surveys, and Monitoring

**Strategic Issue:** Management and policy actions must be evaluated and results documented, communicated, and incorporated into management objectives and budgets

(Strategic Goals: 1, 8)

Effective management requires confident policy judgments, information-based management, and archived knowledge. Evaluation must be actively integrated into management programs as a “way of doing business.” Ultimately, resource decisions should be based on structured learning, constantly increasing institutional memory, clear measures of accountability, purposeful gains in efficiency, and predictable management outcomes. Involvement of policy-makers, researchers, and managers is essential. An expectation for informed management must be shared by those using the information as well as those collecting it.

### **Desired Result**

- ❖ An adaptive management process in which:
  1. Resource managers (based on experience) and resource scientists (based on the literature and current research) agree on what is known about the resource in question.
  2. Managers clearly identify specific management objectives (value judgments may be required by policy makers) and key management uncertainties or disagreements are clearly stated.
  3. Possible management actions are identified and agreement is reached on a specific plan for applying management treatments.
  4. Monitoring plans (what is collected, how frequently, standard methods, by whom, etc.) are developed and resource scientists and managers share in data collection, analysis, and reporting.
  5. Management regimes and resource policies are amended based on the results of monitoring and evaluation.

### **Performance Measures**

- ✓ Attendance among divisions at workshops (number) convened to establish management evaluation needs (*establishes commitment among divisions and active participation in developing objectives and monitoring*).
- ✓ Management uncertainties explicitly outlined in planning documents (e.g. RMGs) (*reflects greater attention to evaluation planning*).
- ✓ Adequate funding for evaluation included in management projects (*increased funding explicitly included in plan initiatives – e.g., 10% of project cost should be evaluation*).
- ✓ Number of management evaluation projects and increased emphasis on cross-regional evaluations (*FY04 – 13 projects with only 2 cross-regional*).
- ✓ Resource science and manager time dedicated to management evaluation recorded in Raptor (MES) (*New RAPTOR code – FY04 establishes a baseline for evaluating increased emphasis*).
- ✓ Number of co-authored reports (managers and Science) including results of evaluation projects (*currently no clear process by which results are reported and archived*).

**Why are these performance measures important?**

Ultimately, the measure of success will be management programs that are evaluated and amended based on the information collected. A change in the philosophy of information gathering and application, however, will involve a step-wise process of 1) recognizing the need and establishing expectations, 2) committing to active participation, 3) incorporation into project planning, 4) ensuring adequate funding, 5) implementation of evaluation efforts as a "way of doing business," and 5) sharing and archiving what we learn.

**What factors influence these performance measures?**

Administrative support and expectations, budget commitment, and resource manager willingness and time availability will play key roles in management evaluation.

**Is there information or data supporting this strategic issue (e.g., trend analysis)?**

Numerous examples of the value of applied information to improve management are available. There are no examples, however, of a structured learning approach to agency-wide adaptive management.



**Program Area:** General Agency Operations

**Strategic Issue:** Excellent public service achieved by diverse, well-trained employees, and consistent processes that provide responsibility, authority, and accountability  
(Strategic Goal: 8)

Being stewards of Missouri's fish, forests and wildlife carries a responsibility which goes beyond our mission of sustaining these natural resources for current and future generations. It also requires public confidence in the Department's ability to meet their needs, not with satisfactory service, but with superior public service. We must continuously explore ways to build customer satisfaction or we may lose our stakeholders to the myriad of other entities vying for their time, money and support. Maintaining a workforce that believes in what it is doing and represents the unique cultural differences in our state will help our stakeholders trust the actions we take on their behalf and recognize our high standard of excellence. Continuous development of this diverse workforce in competencies we believe reflect superior work standards and behaviors can enable staff to deliver at an ever-increasing level of excellent public service. Likewise, providing staff with systems and processes that support our service excellence commitment gives them the authority and responsibility to better meet the public's needs. These commitments to our workforce and to our stakeholders embody the mission, vision and values of our agency and will maximize our efforts to provide superior public service.

### **Desired Results**

- ❖ Retention of a diverse workforce that models competencies and behaviors consistent with superior public service
- ❖ Superior public service that inspires customers' confidence in the Department's ability to meet their needs while accomplishing its natural resources mission

### **Performance Measures**

- ✓ Composition and tenure statistics of workforce
- ✓ Workforce achievement of Department core competency skills and behaviors
- ✓ Public acceptance of and feedback on Department-wide customer service

### **Why are these performance measures important?**

Knowing workforce composition and career longevity may help the Department identify areas of underutilization and dissatisfaction. This knowledge can be translated into specific actions which improve processes or remove barriers affecting our diversity balance and our employees' tenure commitment.

Employees need to possess and use skills and competencies the Department believes are necessary for them to successfully perform their jobs and provide superior customer service. Monitoring employee completion of development activities established to build these skills and tracking their mastery of these behaviors will assure the Department is maintaining a workforce that is not only equipped to do their jobs, but is evaluated and held accountable for their successfulness.

Superior customer service must be based on knowledge of what our customers believe is important to successful customer relations. This feedback can help us improve business

processes and systems which may be impediments to quality service and/or reinforce behaviors proven to be successful.

**What factors influence these performance measures?**

Workforce composition can be influenced by a number of factors such as job availability, level of applicant interest, and diversity of applicant pool. Workforce retention can be dependent on issues such as the total compensation package, level of job satisfaction, and opportunities for career movement. Workforce achievement of successful service skills can be influenced by time spent in development activities, agency and managerial support of a quality service philosophy, and the recognition and rewards employees receive for superior service efforts. Customer feedback can be influenced by surveying methods, consumer experiences with the Department, and their level of interest in our activities.

**Is there information or data supporting this strategic issue (e.g., trend analysis)?**

Census 2000 data shows a growing, diverse Missouri population. Missouri's Black or African-American population remained the largest race or ethnic minority and grew at over twice the overall state growth rate last decade. The Hispanic population, while still a relatively small percentage of Missouri's population, nearly doubled in size. Furthermore, projected state populations by race and Hispanic origin show increasing percentages of these groups through 2025. This data can support Department efforts to achieve a corresponding workforce diversity and Department program diversity which reflects the values and expectations of all Missouri citizens.



**Program Area:** General Agency Operations

**Strategic Issue:** MDC's data management systems must provide increased integration, accessibility, and use of information and databases  
(Strategic Goal: 8)

Database management and information transfer are primary needs for management and policy decisions. There is a need for integrated data collection, quality assurance and quality control of data, data entry and maintenance, and results dissemination leading to greater utility of data. The advantages of more rigorous sampling designs and spatial representation of data as well as training end users on where and how to access data are also apparent. Data that are not readily available are not useful. A database management system will make information both available and useful and allow better management decisions by integrating multiple data layers and datasets to enhance decision making throughout the agency. Among factors limiting growth in these areas are 1) administrative understanding and direction, 2) numbers of positions dedicated to accomplishing the work, 3) hardware and software, 4) using technology to its fullest extent to disseminate data to all constituents and 5) particular skills (although this largely is in place if additional bodies were available). Primary needs include:

- 1) an integrated budgeting, time, and accomplishment reporting system, and
- 2) a scientific data management system that includes:
  - a. metadata standards
  - b. more centralized data warehousing
  - c. web-based systems for submission and retrieval
  - d. geographic information systems (GIS) technology
  - e. standards for data sharing and ownership
  - f. standardized coding schemes
  - g. protocols for data management and archiving

**Desired Results**

- ❖ An integrated enterprise-wide data management system
- ❖ A centralized data management system that all employees can access and use
- ❖ Data collection and metadata standards and protocols used by all department employees
- ❖ Collection only of data useable for decision making

**Performance Measure**

- ✓ Employee use of and satisfaction with data management systems
- ✓ Updated and useful metadata
- ✓ Frequency of "hits" on the Department enterprise-wide data management system

**Why are these performance measures important?**

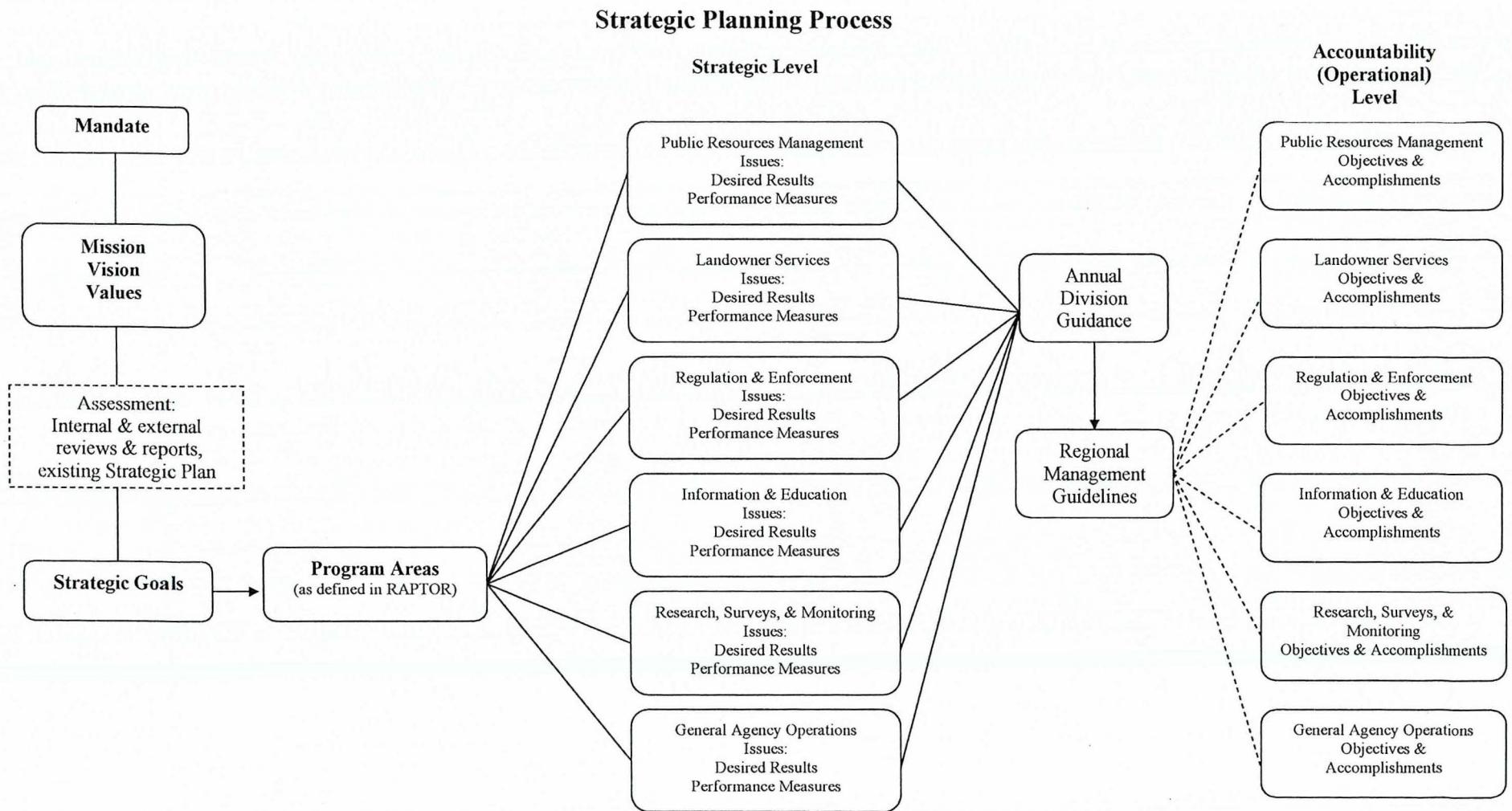
We are currently in a data management crisis. Databases and datasets are being developed with limited thought for how these data will be used by other employees. Having standardized data management protocols that all employees follow when collecting, entering, and storing their data and presenting results on multiple platforms will allow easier data sharing and dataset merging both within and between interest areas. It will also greatly improve the usability of archived data in the future. Without such a system and standards it will be virtually impossible to interpret datasets on a landscape scale. In addition, with no centralized system many datasets are lost when an employee moves to another position or leaves MDC employment.

**What factors influence these performance measures?**

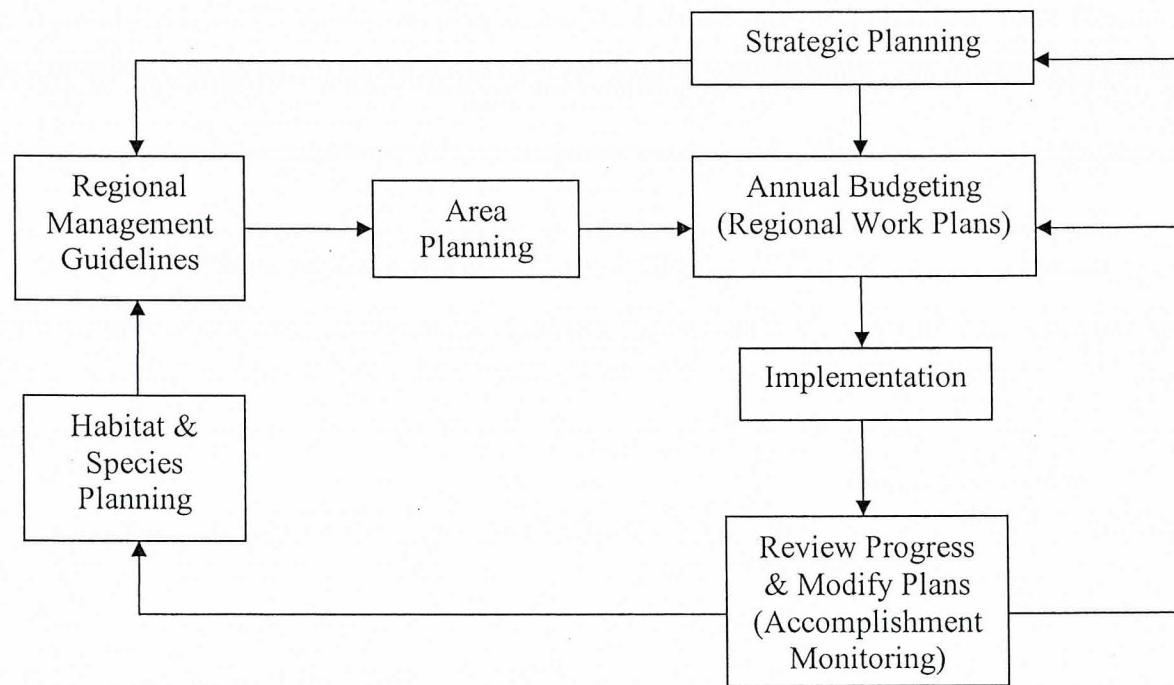
Making this system a reality will require more database management personnel as well as support and commitment from department administration about establishing standards and protocols. Also, willingness of staff at all levels to access and use information will require knowledge of availability, training in use of methods of communication and information transfer, and the time necessary to use up-to-date information.

**Is there information or data supporting this strategic issue (e.g., trend analysis)?** None

## **APPENDICES**



## RELATIONSHIP OF MDC PLANNING ACTIVITIES



## PLANNING AND BUDGETING TIMETABLE

### Calendar Year

Activity/Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Internal Budgeting						E						B
Work Planning						E						B
Strategic Planning					B					E		
Executive Budgeting							B		E			

### Fiscal Year

Activity/Month	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Internal Budgeting						B						E
Work Planning						B						E
Strategic Planning				E							B	
Executive Budgeting	B		E									

B = Begin

E = End

## PLANNING AND BUDGETING TIMETABLE

<b>July</b>	Begin new fiscal year. Strategic Planning continues: draft Strategic Plan document submitted to OA Budget and Planning; collect new Strategic Issues. Executive Budget process begins.
<b>August</b>	Strategic Planning continues as reviews, edits, additions, etc. are compiled. Executive Budget development continues: Form 5 is distributed to Divisions; Divisions develop (or revise) annual guidance documents.
<b>September</b>	Strategic Plan compilation process is completed and a draft is shared with Administration. Executive Budgeting continues: Divisions continue developing annual guidance documents.
<b>October</b>	Final Strategic Plan document is presented to the Commission. Executive Budget and Strategic Plan submitted to OA Budget and Planning by October 1 <sup>st</sup> . Preliminary internal planning and budget instructions out for review by Division Administrators, Unit Chiefs, and Regional Coordination Teams (RCTs). By October 15 <sup>th</sup> , Divisions distribute annual guidance documents to Administration and other Division Administrators. Between October 15 <sup>th</sup> and November 1 <sup>st</sup> , Administration and the Division Administrators meet to discuss guidance documents.
<b>November</b>	Continue review of internal planning and budget instructions by Division Administrators, Unit Chiefs, and RCTs. Divisions finalize guidance documents.
<b>December</b>	Final internal planning and budget instructions distributed to Division Administrators, Unit Chiefs, and RCTs. Division guidance documents distributed to RCTs concurrently with Department budget instruction. Internal budgeting begins: RCTs begin to develop regional plans and budgets. Work planning begins.
<b>January</b>	Regional planning and budgeting continues. Work planning continues.
<b>February</b>	Regional planning and budgeting continues. Work planning continues. Regional budget requests due to Unit Chiefs by mid-February. Preliminary Research budget due to Divisions by mid-February and reviewed.
<b>March</b>	Research budget review completed. Unit Chiefs and Division Administrators review regional budgets. All budgets submitted to Deputy Director by mid-March. Work planning continues.
<b>April</b>	Administrative review of budget requests. Unit Chiefs and Divisions make changes in RAPTOR resulting from Administrative review. Work planning continues.
<b>May</b>	Internal budget goes to the Commission for review and approval at the May meeting. Strategic Plan review and progress reporting begins: Strategic Plan issues distributed to Division Administrators to report progress and make recommendations for improvement. Work planning continues.
<b>June</b>	Budget changes resulting from Commission action are entered in RAPTOR. Individual work plans are developed. Strategic Planning continues. Work planning ends.

## GLOSSARY OF ABBREVIATIONS

BMP	Best Management Practices
CRP	Conservation Reserve Program
CWD	Chronic Wasting Disease (deer)
DNR	Missouri Department of Natural Resources
EQUIP	Environmental Quality Incentive Program (NRCS program)
FLEP	Forest Land Enhancement Program
GIS	Geographic Information Systems
LMBV	Large Mouth Bass Virus
MDC	Missouri Department of Conservation
NIPF	Non-Industrial Private Forest lands
NRCS	Natural Resources Conservation Service
RAM	Resource Assessment and Monitoring (aquatic study and associated database)
RAPTOR	MDC budgeting and accomplishment monitoring program
RMG	Regional Management Guidelines
SOD	Sudden Oak Death
T&E	Threatened and Endangered species (usually indicates Federally listed species)
WD	Whirling Disease (trout)